

MONTHLY LETTER OF THE BUREAU OF ENTOMOLOGY
UNITED STATES DEPARTMENT OF AGRICULTURE

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BUREAU COMMITTEE ON MANUSCRIPTS

The increasing number of manuscripts presented for publication and the widening diversity resulting from modern specialization have made evident the need of a careful consideration by the Bureau of the question of publications. On May 3, 1924, therefore, I appointed a special Committee on Manuscripts. This Committee is composed of the following members: Dr. Baker (Chairman), Prof. Dean, Mr. Graf, Dr. Back, Mr. Webb, Dr. Phillips, Mr. Burgess, Dr. Craighead, Mr. Rohwer, and Mr. Currie. This Committee will be charged with the critical examination of all manuscripts submitted for publication. Each manuscript will be read by several members of the committee and by such specialists as may be called upon for assistance. The committee will also undertake to prepare a tabulation of the different types of papers in which the work of the Bureau may be reported to best advantage, and some discussion of the criticisms which manuscripts have received. This tabulation, together with a list of publications of value in the preparation of scientific papers, will be made available to bureau experts.

It is hoped that the activities of the Committee will facilitate a more accurate, concise, and scientific presentation of results, and all employees are urged to cooperate as fully as possible in order to expedite publication.
L. O. H.

FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, Entomologist in Charge

Fred E. Brooks, of the French Creek, W. Va., Station, spent May 21 to 26 in Washington and in the vicinity of Petersburg, Va. Arrangements were made for carrying on experiments in chestnut-weevil control this season in the Department's chestnut orchard at Bell, Md. Mr Brooks is also preparing to continue work on the hickory twig-girdler (*Oncideres cingulata*), and on several species of *Agrilus* injurious to nut trees.

Oliver I. Snapp, in charge of peach insect investigations at Fort Valley, Ga., states: "Jarring records and results of peach 'drop' experiments show that the curculio infestation at the present time is lighter in the Georgia peach belt than at any time since the curculio suppression campaign was started four years ago. The quality of the fruit on the trees is the best since 1918, and there are very few indications of curculio work. Georgia will in all probability harvest this year the largest crop that has ever been produced in the State."

B. S. Brown, Jr., a senior at Clemson Agricultural College, has been appointed field assistant at the Fort Valley field station, to assist with curculio investigations.

Prof. A. F. Conradi, State Entomologist of South Carolina, and a delegation from his State visited the peach insect laboratory at Fort Valley, Ga., on May 20, to observe investigations under way.

E. J. Newcomer, in charge of the Yakima, Wash., Station, writes: "There was a very decided increase in the amount of oil used as a dormant spray in the Yakima Valley this spring. In 1923 not over 200 barrels were used. In 1924 there have been about 10 carloads of lubricating oil and 4 carloads of prepared oil sprays used, equaling about 1,200 barrels of stock spray. This would be enough to spray about one-tenth of the trees in the valley. In spite of this, lime-sulphur manufacturers report the sale of more lime-sulphur than last year. Of the oils used, probably as much cold-mixed casein-oil emulsion was used as anything, the growers making it themselves with power spray outfits."

Dr. B. A. Porter, in charge of apple insect investigations at Vincennes, Ind., states: "Orchard men in southern Indiana continue to report good control of the San Jose scale with the lubricating-oil emulsion. Counts made recently in two commercial orchards showed 0.7 per cent of live scale in one, and 0.1 per cent in the second.

"Two interesting points were brought out by an investigation into a serious injury to peach trees in southern Indiana, which for a time was attributed to the use of paradichlorobenzene for the control of the peach tree borer, but was soon shown conclusively to be due to winter injury. The first point was the extent to which this chemical treatment has been adopted by the growers. It was impossible to find a commercial orchard of any size which had not been so treated. The second point was the almost total absence of borers from the treated orchards, most of which have now had three annual treatments. In the best orchards less than one per cent of the trees examined showed any sign of recent borer infestation, while untreated trees in this section are absolutely infested."

Basil E. Montgomery of Poseyville, Ind., is assisting during the summer in the work of the station at Vincennes. Mr. Montgomery is a graduate of Oakland City College, and is planning to take graduate work in entomology at Purdue this fall.

H. K. Plank, in charge of the camphor scale project at New Orleans, and W. D. Whitcomb visited some Satsuma orange groves near Mobile, Ala., on May 8 and 9, with a view of inaugurating spraying experiments in the control of the camphor scale. In one grove, reported to be a fair average of the southern Alabama orange district, about 75 per cent of the trees were entirely killed by the freeze of last January, when the temperature went to about 14° F. Two small Satsuma groves near Gulfport, Miss., were almost entirely wiped out by this freeze, and in one large grove near Lyman, Miss., in perhaps better growth condition, about 30 per cent of the trees were killed. Few if any of the Satsuma trees which survive will produce fruit this season.

On May 14 and 15, Messrs. Plank, Whitcomb, and Catchings, with Ed. Foster, Collaborator of the Federal Horticultural Board, judged an exhibition of insects

at New Orleans, in which two New Orleans Normal School classes and seven New Orleans grade schools competed for local prizes. These exhibits are held twice a year and a great deal of interest is shown in them by all the students.

A. I. Fabis, of the Brownwood, Tex., laboratory, writes that Phylloxera caryaecaulis galls are numerous on native pecan timber in that section. He also states that Melanoplus differentialis is about as severe as during last season, when this pest defoliated pecan trees adjacent to fields and in planted orchards.

TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, Entomologist, Acting in Charge

K. L. Cockerham, of Biloxi, Miss., and S. C. Brummitt, of Silverhill, Ala., recently met with the authorities of the Alabama State Board of Agriculture, at Mobile, Ala., to formulate further plans for the future conduct of the sweet-potato weevil eradication work in Alabama in cooperation with the above board.

J. E. Dudley, of Madison, Wis., has opened a branch laboratory for the summer at Columbus, Wis., where extensive tests will be conducted on the control of the pea aphid with various insecticides and the aphidozer which he designed last year. Any observations of particular interest on the pea aphid should be sent to Mr. Dudley, at Columbus.

N. F. Howard, of Birmingham, Ala., visited Columbus and other points in Ohio, to prepare plans for the establishment of a new temporary substation at Columbus for the study of the Mexican bean beetle in its occurrence in Ohio. He also conferred with State and University officials.

M. M. High, of Gulfport, Miss., visited various points in the lower Rio Grande Valley to check up the results of various experiments against the sweet-potato weevil and other truck-crop pests.

D. E. Fink, of Riverton, N. J., visited Washington during the latter part of May to discuss the publication of various manuscripts which he has prepared on truck-crop insects, including the strawberry leaf-roller and its principal parasite.

Appointments

Rodney Cecil, who has just completed special work at Iowa State University leading to a master's degree, has been appointed Junior Entomologist at the Birmingham laboratory to assist Mr. Howard in the Mexican bean beetle investigations.

T. E. Bronson has been given temporary appointment as Field Assistant to assist J. E. Dudley in the pea aphid investigations during the summer.

Resignations

Alfred Lutken, Agent, stationed at Picayune, Miss., has resigned to undertake special work in the Hawaiian Islands.

BEE CULTURE INVESTIGATIONS

E. F. Phillips, Apiculturist in Charge

E. F. Phillips, who has had charge of the Bee Culture work of the Bureau since 1907, and who entered the Bureau in 1905, will leave the service some time during the late summer to accept a professorship in Apiculture in the College of Agriculture, Cornell University. He will devote his time there chiefly to graduate students and to research work in apiculture.

Bruce Lineburg and L. M. Bertholf, who were employed at the Bee-Culture Laboratory last summer, have been reappointed for the present summer and have begun work. Mr. Lineburg will receive the degree of Doctor of Philosophy at the Johns Hopkins University this month.

Carlton Burnside, a graduate student at the University of Michigan, has been appointed for the summer season to investigate the fungi of the alimentary tract of the adult bee. He is taking graduate work in mycology at the university.

R. B. Willson, who has been doing extension work in beekeeping in cooperation between this office and the College of Agriculture, Cornell University, will continue that work under the administration of the university after July 1. C. L. Sams, who has been doing similar cooperative work in North Carolina, will also be continued after that date without support from this office. The cooperative extension work in Wisconsin will not be continued after July 1. With these changes, all cooperative extension work in beekeeping from this office is discontinued.

A. P. Sturtevant left May 29 for Wyoming, where he will investigate what appears to be a serious outbreak of sacbrood, a disease of the brood of bees. He will probably return before the end of June.

E. F. Phillips and Jas. I. Hambleton attended the meeting of the Maryland Beekeepers' Association at College Park, Maryland, on May 31.

SOUTHERN FIELD-CROP INSECT INVESTIGATIONS

J. L. Webb, Entomologist Acting in Charge

J. C. Hamlin, formerly employed by the Federal Horticultural Board, and more recently in charge of the entomological work for the Commonwealth

Prickly Pear Board of Australia, was reinstated in the Department on May 2, and assigned to duty at the Boll Weevil Laboratory at Tallulah, La. Mr. Hamlin is to give attention to the chemotropic responses of the boll weevil.

B. R. Coad and T. P. Cassidy were in Washington for a few days early in May in connection with boll weevil work.

Dr. F.A. Fenton, recently appointed and assigned to biological work on the boll weevil at Florence, S. C., was in Washington May 3 to 5 for consultation with the Chief of the Bureau.

Alan P. Dodd, who has been sent from Australia to take up the work on cactus insects recently relinquished by J. C. Hamlin, had a conference with the latter and Dr. W. D. Hunter at Tallulah, La., on May 20. He visited Washington later.

The March issue of the American Journal of Tropical Medicine (Vol. IV, No. 2) contains an article by Geo. H. Bradley of the Mound, La., laboratory, entitled "The natural breeding places of *Anopheles* mosquitoes in the vicinity of Mound, Louisiana."

L. F. Greer was appointed Temporary Field Assistant at the Boll Weevil Laboratory, effective May 15.

F. S. Chamberlin reports that in spite of a heavy infestation of tobacco budworms in the south Georgia flue-cured tobacco region excellent control is being obtained where growers are using the poison mixture devised by the Bureau of Entomology. The mixture consists of 1 part by weight of arsenate of lead to 75 parts corn meal. Weekly applications appear to be sufficient for control of this type of tobacco.

FOREST INSECT INVESTIGATIONS

F. C. Craighead, Entomologist in Charge

Dr. Craighead spent several days during May in the vicinity of Asheville, N. C., examining southern pine beetle outbreaks and control work conducted during the previous winter.

A. H. MacAndrews has been appointed temporary field assistant and will be stationed near Asheville for the summer months. He will conduct certain investigations on the life history of the principal pine insects in this region. Part of his work is to be associated with that of the Appalachian Forest Experiment Station.

Dr. T. E. Snyder, in cooperation with the metallurgical laboratory of the Bureau of Standards, United States Department of Commerce, is conducting tests with various metals and alloys sprayed on wood and lead to protect these substances against the attacks of termites and powder-post beetles. Control

materials are sprayed with softer metals which have already been penetrated by the insects. Several alloys appear to be promising, but some metals have failed on account of rapid oxidation.

J. Zetek, of the Division of Tropical Fruit Insects, and Dr. Snyder, of this office, have been working since February on a manuscript on the biology and control of the termites of the Canal Zone and near-by Panama. The paper will be well illustrated, and will urge the economic importance of these very abundant insects, advocating and describing effective measures for control. In the Canal Zone are 35 known species of termites, representing 22 genera or subgenera. A map will show their distribution.

J. M. Miller spent the period from May 19 to May 23 on the Snake Lake light burning experimental area in company with Mr. Show, of the Forest Service. This experiment was undertaken in the Plumas National Forest in 1919 to test out the results of periodically burning the ground cover in a selected forest of 200 acres. One of the most important results to date has been the concentration of barkbeetles on the area following the fire. The number of trees killed by the insects considerably exceeds the number of those killed by the fire, but in this case the light damage by fire appears to have been a factor in attracting barkbeetles to the trees. The study of the interrelation of insects and fires is being carried on cooperatively with the Forest Service in District 5.

H. L. Person and Albert Wagner have just completed a survey of the cutover areas on the Sierra National Forest, to determine the extent to which insect losses are affecting the second crop of timber.

During the first part of May a preliminary examination of the proposed forest insect control project in the Missoula National Forest was made by J. C. Evenden and Elers Koch, Assistant District Forester, District 1. This project calls for a line of defense against the heavy epidemic of the mountain pine beetle, which threatens the valuable lodgepole pine stands of the Deer-lodge and southern Missoula National Forests. At the present time H. J. Rust, Entomological Ranger of this station, is marking the trees that are to be treated, and it is expected that control work will be started by May 22.

Mr. Evenden left Coeur d'Alene, Idaho, on the 20th of May for the experimental control project on the Coeur d'Alene National Forest. Mr. Evenden was accompanied by Mr. Mooney, of the Coeur d'Alene Forestry Office, who will have charge of the administrative work of the project. Several days will be spent in marking the trees prior to the arrival of the crew. The very early and dry spring which this region has experienced has made it necessary to start this project some ten days earlier than was planned, because of the advanced development of the insect broods.

J. E. Patterson and P. D. Sergeant, of the Ashland Field Station, are cruising the timbered zones adjacent to the Greenspring road slash in southern Oregon. This slash study was started in 1920 and will be completed the present season. It consists of the analysis of the attack and infestation of Dendroctonus

brevicomis in yellow pine trees slashed on the right of way of the highway and of a study of resulting conditions in the standing timber adjacent to and within 3 miles of the slash. A slashed strip 1 chain wide and 40 miles long is involved in this study. This strip passes through a primitive stand of pine timber typical in every way of the forested areas of the southern Oregon-northern California region, so that the results of this study should be applicable to the region in general.

During the past month, Dr. H. E. Burke has continued his investigation of the Monterey pine sawfly. While the investigation was in progress the insects emerged and deposited eggs which are now hatching. An unsuccessful attempt was made to fumigate the earth where these insects were overwintering in the larval stage, using paradichlorobenzene. It is possible that during the winter the temperatures were too low to volatilize the fumigant.

R. A. St. George has just left for an extended trip through the South. He will visit several large lumber companies which are conducting cooperative experiments on the prevention of insect injury to crude forest products. One or two large-scale tests of chemicals for the prevention of insect attack will be tried out.

About 500 white, red, and yellow pine and Douglas fir seedlings have recently been planted at the Eastern Field Station, East Falls Church, Va. These seedlings were received through the courtesy of the Forest Service and are to be used for experimental purposes, particularly for the feeding of defoliating insects.

CEREAL AND FORAGE INSECTS INVESTIGATIONS

G. A. Dean, Entomologist in Charge

Prof. Geo. A. Dean and W. R. Walton visited Brooklyn, N. Y., May 22, to inspect the corn borer clean-up work in progress there.

E. E. Russell, formerly located at Gainesville, Tex., assisting in the greenbug and grasshopper investigations under direction of C. H. Gable, has been transferred to Yuma, Ariz., where he will initiate an investigation of the alfalfa seed chalcis under the direction of V. L. Wildermuth. This work is being started at the request of the producers of Peruvian alfalfa seed in the Yuma valley, whose industry is threatened by the inroads of the seed chalcis.

E. J. Udine, a senior student at the Montana Agricultural College, has accepted an appointment for the summer as Assistant in the grasshopper investigation under the direction of Stewart Lockwood, Billings, Mont.

John W. Nuttycombe has accepted a temporary appointment as Assistant to W. J. Phillips in the jointworm investigation in progress at Charlottesville, Va. Mr. Nuttycombe is a senior student at the Virginia Polytechnic Institute.

MISCELLANEOUS INVESTIGATIONS

(Items from the National Museum contributed by S. A. Rohwer)

S. A. Rohwer left Washington on May 28 for the purpose of investigating the practicability of introducing parasites into the forestry plantation at Halsey, Nebr., as a check on the ravages of the pine tip moth, Evetria bushnelli. This moth is causing severe damage to the pines on the reforestation project there. Mr. Rohwer will be absent for a month, or possibly more.

On May 5 R. C. Shannon, at the request of James Ricker and with the permission of the Bureau of Entomology, went to Poland Springs, Me., where he spent ten days investigating the mosquito situation of the Poland Springs estate. The North Woods Aedes species were found to be very abundant in the temporary pools and small ponds about the place. Control measures were immediately started. Investigations of other insects were made at the same time. On his way back Mr. Shannon stopped off to see the collections of Diptera at Cambridge and Boston.

At the invitation of Samuel Henshaw and Nathan Banks, of the Cambridge Museum of Comparative Zoology, and Profs. W. M. Wheeler and C. T. Brues, of Bussey Institute, Dr. E. A. Schwarz, accompanied by R. C. Shannon, went for several days to Cambridge and Boston. At the Cambridge Museum Dr. Schwarz made an examination of the Coleoptera collections of Le Conte, Melsheimer, Ziegler, and others, and helped Mr. Banks elucidate a number of tangles existing among the various labels on the specimens, and clear up other points relating to type specimens. Mr. Shannon studied the types in the Osten Sacken-Loew collection. The Entomological Society of Cambridge had a special meeting, a smoker, in honor of Dr. Schwarz. Here he met a number of his old friends and many new entomologists who are now members of this club. C. W. Collins took Dr. Schwarz for a visit to the Gipsy Moth Laboratory at Melrose Highlands, where he met the personnel and was shown the different phases of their work.

Dr. J. M. Aldrich left on May 31 for a two months' trip through the West. He will visit Kansas City and Atherton, Mo., San Francisco, Berkeley, and Redlands, Calif., Portland, Oreg., Pullman and Seattle, Wash., and other points, where he expects to do some collecting and consult with various specialists. He will also spend several weeks visiting relatives and friends.

LIBRARY

Mabel Colcord, Librarian

New Books

Atkins, E. W. and Hawkins, K.

How to succeed with bees... Madison, Wis., 1924. 96 p., illus.

Brumpt, E.

Un voyage medical, dans l'Agrique du Sud. Paris, Masson et cie, editeurs, 1923. 104 p., illus.

Deutsche Gessellschaft für angewandte Entomologie.

Verhandlungen 2 ... zu München, vom 24 bis 26 September, 1918. Berlin, Verlagsbuchhandlung Paul Parey, 1919. 206 p.; illus.

Ferris, G. F.

Contributions toward a monograph of the sucking lice. Pt. 4. Stanford Univ., Cal. Published by the Univ., 1923. p. 183-270., illus. (Stanford Univ. Biol. Sci. v. 2, no. 4.)

Floericke, K. E.

Falterleben... Stuttgart, Kosmos, 1923. 77 p., illus.

Fries, A. A. and West, C. J.

Chemical warfare. N. Y., McGraw-Hill Book company, Inc., 1921. 439 p., illus.

Hingston, R. W. G.

A naturalist in Hindustan. London, H. F. & G. Witherby, 1923. 292 p., plates.

Leefmans, S.

De koffiebessenboek (Stephanoderes hampei Ferrari, coffeae Hagedorn) II. Batavia, Ruygrok & Co., 1924. 99 p., pl. (Med. van het Instituut voor Plantenziekten No. 62.)

Melin, Douglas.

Contributions to the knowledge of the biology, metamorphosis and distribution of the Swedish asilids in relation to the whole family of asilids. In Zoologiska Bidrag fran Uppsala, Bd. 8, 1923, p. 1-317, illus. Literature. List of works referred to in text, p. 309-312.

Peragallo, Alexandre.

Insects nuisibles a l'agriculture 1^{er} fasc. L'olivier, son histoire... see maladies et ses amis 2^{me} fasc. Le frelon (Vespa crabro) et son nid. 2. ed. Nice, 1882. 180 p., 1 col. plate.

Prell, Heinrich.

Anopheles und die malaria. Berlin, Paul Parey, 1919. 61 p. (Flugischriften der Deutschen Gesellschaft für angewandte Entomologie Nr. 9.)

Root, E. R.

Wintering bees. Medina, O. The A. I. Root Co., 1923. 72 p., illus.

Smith, Jay.

Queen rearing simplified... Medina, O. The A. I. Root Co., 1923. 19 p., illus.

Sohon, J. A. and Schaaf, W. L.

A reference list of bibliographies on chemistry, chemical technology and chemical engineering, published since 1900. N. Y., The H. W. Wilson Company, 1924. 100 p.

Tanzer, Ernst and Osterwald, Hans.

Anopheles und malaria in Halle... Leipzig, J. A. Barth, 1919. 48 p., illus. 2 pl. map. (Beihefte zum Archiv für schiffs- und tropenhygiene... Bd. 23, Beiheft 2.) Literaturverzeichnis, p. 45-48.

Tillyard, R. J. and Dunstan, B.

Mesozoic insects of Queensland. Brisbane, A. J. Cumming, 1923- Part I. Dunstan, B. Introduction and Coleoptera. 88 p., 7 pl. (Queensland Geol. Survey Pub. 273.)

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